CAMBRIDGE/BIOTECH:

HISTORY IN THE MAKING

Cambridge's universities, institutes, and life sciences firms continue our longstanding tradition of innovation . . . . . .

Welcome to Biotech in Cambridge

Cambridge continues to reinvent itself. Over the past decade, biotech research has emerged as a most important focus for our business community. With our roots in the American Revolution, Cambridge continues to be one of the most innovative cities on the planet; at the same time, Cantabrigians care deeply about the quality of life here, and strive to maintain the special qualities of this historic community. Our history of revolutionary thinking forms the backdrop for the current revolution in genomic research, nano-technology, and brain science.

Why has Cambridge become one of the world's most important centers of biotech research? This is a great place in which to work, reside, and enjoy a diverse array of cultural activities. Further, we have access to an unmatched pool of talent and a wealth of institutional resources.

We are excited to be one of the world's major biotech centers. Moving forward, new people and ideas are welcome as we work toward the goal of keeping Cambridge true to itself—celebrating our diverse history as we look to an ever-improving future. I hope that this brochure helps you understand why Cambridge is such a great place for biotech, and a wonderful community overall.

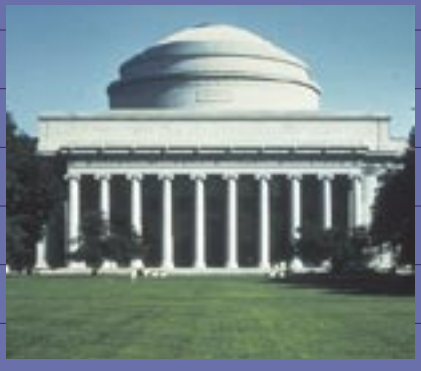
Sincerely,

Robert W. Healy, City Manager
Cambridge, Massachusetts
www.cambridgema.gov

The Museum of Science overlooks the Charles River Basin, with Cambridge on the right and Boston to the left.

Harvard News Office

65% of Cambridge adults are college graduates, 38% have graduate degrees



Cambridge region benefits from the world's largest concentration of biotechnology and medical institutions

1630 A group from the Massachusetts Bay Company settles in Cambridge

1636 Harvard University established

1775 George Washington occupies Brattle Street home later owned by Henry Wadsworth Longfellow

Largest Biotechnology Firms in Cambridge: Genzyme Corporation, Biogen Idec Incorporated,

A Great Place to Live and Work

Cambridge is a very special community, in a culturally rich and diverse region, unrivaled in its appeal for life sciences endeavors. More than 100 colleges and universities, Massachusetts General Hospital, and the Longwood Medical Center are close by. The regional transit system makes it easy to go from downtown Boston to points in Cambridge in only minutes. Logan International Airport, with easy connections to Europe, is about 20-30 minutes away by transit, taxi, or car, via the new Ted Williams tunnel.

Massachusetts Avenue (known locally as "Mass Ave") and the Red Line of the MBTA connect the MIT campus, Central Square, Harvard Square, and Porter Square, with extensive bus and trolley lines covering the city.

A dense, vibrant city of 100,000 people, living in 6.25 square miles, Cambridge offers a uniquely walkable environment with many pleasant neighborhood settings. These include pre-revolutionary mansions along Brattle Street, close-knit communities like East Cambridge, which was developed to serve as housing for workers in the traditional industrial districts, and, interspersed among these historical areas, a mix of modern apartments and condominiums. Scattered throughout the community are some 75 parks, squares, and playgrounds, all well-used by the community.

1820 First commercially manufactured varnish in the United States

1845 Elias Howe perfects sewing machine model

1876 First long distance phone call: Kilby Street, Boston to Osborn Street, Cambridge

Millennium Pharmaceuticals Inc., Vertex Pharmaceuticals Inc., Abt Associates Clinical Trials,

A Look at Top Biotech Employers in Cambridge

The strong presence of venture capital in the Boston metropolitan area, at least 56 firms, is helping fuel the growth of biotech in Cambridge. Of the more than 50 life sciences companies in Cambridge, the top employers headquartered here demonstrate the breadth of endeavors underway.

Genzyme

The company's areas of expertise include cell, gene, and protein therapies; drug discovery and development; surgical biomaterials; diagnostics; and genetics and genomics.

Peter Vanderwarker

Genzyme has grown in Cambridge. Its most dramatic new growth is into a new headquarters, just a block from the Kendall transit station and the MIT campus. The building uses green technology, having received the highest rating given by LEEDS—the platinum category. This project was constructed on a brownfields site where coal used to be turned into gas for energy consumption. The new building is beautifully daylit, with sunlight sent into an atrium via tracking mirrors on the roof and with many interior planted areas.

Biogen Idec

Biogen Idec creates new standards of care in oncology and immunology. As a global leader in the development, manufacturing, and commercialization of novel therapies, Biogen Idec transforms scientific discoveries into advances in human healthcare.

Millennium Pharmaceuticals

Millennium markets Velcade for Injection, a novel cancer product; co-promotes Integrilin Injection, a market-leading cardiovascular product; and has a robust clinical development pipeline of product candidates. The company's research, development, and commercialization activities are focused in three therapeutic areas: oncology, cardiovascular, and inflammation.

Vertex Pharmaceuticals

Vertex Pharmaceuticals is a global biotechnology company committed to the discovery and development of small molecule drugs for serious diseases. Vertex's product pipeline is principally focused on viral diseases, inflammation, autoimmune diseases, and cancer.

Novartis Institutes for Biomedical Research

With two laboratories in Cambridge, Novartis Institutes for Biomedical Research employs 1,000 scientists who are utilizing cutting-edge technologies to explore the intersection of the chemical and biological universes in order to develop new medicines to improve human health.

TKT

Transkaryotic Therapies, Inc. is a biopharmaceutical company dedicated to the research and development of protein therapies for rare diseases.

Alkermes

Alkermes' focus spans the development of long-acting injectable drugs using their Pro-Lease and Medisorb technologies and inhaled formulations based on their proprietary AIR pulmonary technology. The company's world-class expertise in drug delivery enables

1892 Nabisco introduces the Fig Newton at its Cambridge Bakery

1912 MIT moves from Boston to Cambridge

1931 Vannevar Bush and colleagues develop the first analog computer

Novartis Institute for BioMedical Research, Transkaryotic Therapies, Alkermes Inc., Biopure Corp.,

delivery of complex macromolecules and small molecules to enhance drug formulations with the goal of improving outcomes for patients.

Biopure

This company has pioneered the development and manufacture of oxygen therapeutics, a new class of pharmaceuticals that are intravenously administered to deliver oxygen to the body's tissues.

ImmunoGen

ImmunoGen's proprietary Tumor-Activated Prodrug (TAP) technology and strong antibody expertise form the basis for the development of its own anti-cancer products as well as its many partnerships with other companies.

Dyax

Dyax Corp. is focused on advancing novel biotherapeutics for patients with unmet medical needs, with an emphasis on cancer and inflammatory indications. Dyax integrates the discovery and clinical development of its antibody, small proteins, and peptide compounds, with a goal of product commercialization.

Jeannie Joe, R & D Specialist II, at TKT, a research and development bio-pharmaceutical company in Cambridge.

Of the 100 largest biotechnology firms in the Boston region, 24 are in Cambridge

Genzyme & Emerson Process Management

Of the top eleven venture capital firms in Massachusetts, four are located in Cambridge, with a total of $80 million invested

1946 Edwin Land develops instant photographs

1967 John C. Sheehan achieves first chemical synthesis of penicillin

1969 BB&N creates the APRANET, which becomes the Internet in 1990

ImmunoGen Inc., Dyax Corp., UCB Research Inc., Epix Medical, Infinity Pharmaceuticals Inc.,

The Universities Create Leaders in Biotech

Cambridge is particularly fortunate to be the home of two of the world's most renowned institutions, Harvard and MIT. Combined, these two universities employ over 15,000 people. Of the important roles both play in all aspects of Cambridge life, their positive impact on job creation and technology transfer are paramount.

100 Nobel Laureates are Harvard or MIT affiliates

Harvard News Office

Harvard University

Founded in 1636, Harvard predates the establishment of the United States by more than a century. Three hundred and fifty years of Harvard's history in this community have helped shape Cambridge in innumerable ways. The City benefits from the close intertwining of campus, surrounding neighborhoods, the Harvard Square commercial area, and the Charles River.

One of the highest priorities for Harvard is the strengthening of interdisciplinary work in the sciences, with the upcoming Laboratory for Integrated Science and Engineering (LISE) building the most recent manifestation of that policy. LISE will provide high-quality interdisciplinary laboratory space (for physics, chemistry, chemical biology, engineering, and applied sciences) in a new Center for Mesoscale Structures and Materials.

From 1998 to 2003, 88 separate agreements were executed for technology developed by MIT or Whitehead

Massachusetts Institute of Technology

MIT, which has spawned many high tech companies in its 92 years in Cambridge, has taken several steps to build upon its formidable lead in world research in the life sciences, including its support for the Whitehead Institute for Biomedical Research (completed in 1984) and state-of-the art Biology Building (completed in1991).

Now rising across the street from the exuberant Stata Center, designed by renowned architect Frank Gehry, the new Brain and Cognitive Sciences Center will open in 2005. The center will be a model for the way disciplines intersect on the emerging scientific frontier; it promises to become a leading center for brain research, integrating the study of neuroscience, cognitive science, imaging technology, genetic science, and molecular and cellular biology.

Andy Ryan

1982 Lotus 1-2-3, the spreadsheet program, is released to the market

1985 Genzyme Tissue Repair's Epicel process for growing new skin is approved for marketing

1993 MIT researchers discover link between gene mutation and Lou Gehrig's disease

Therion Biologics Corp., Ariad Pharmaceuticals, Altus Biologics Inc., Microbia Inc., Archemix Corp.,

The Private Institutes Broaden the Field

Numerous private institutes complement the City's academic and commercial entities.

The Whitehead Institute

Since 1982, the Whitehead Institute for Biomedical Research has developed an internationally renowned research program with path-finding activities in cancer and HIV research, structural biology, genetics, infectious disease research, developmental biology, and transgenic science. The Institute is an international leader in the Human Genome Project. It was the largest federally funded center for genome mapping and contributed a third of the human genome sequence announced in June 2000.

The Broad Institute

Unprecedented cooperation among MIT, Harvard, and the Broad family, with each party contributing $100 million, has led towards the creation of a new center for genomic research, to be called the Broad Institute. Construction has begun, with the opening to be in 2006.

The Center for Integration of Medicine and Innovation Technology in Cambridge

This center is a collaboration of Draper Labs, Partners Health Care, Massachusetts General Hospital, Brigham & Women's Hospital, and MIT. The work focuses on microsensors for clinical applications and homeland defense, including a sensor to detect bioterrorism agents such as anthrax.

Sam Ogden Photography

At the Whitehead Institute, Niroshan Ramachandran generates a map that illustrates interactions among proteins that may play a role in cancer development.

Cambridge Biotech Taps Educational/Medical Resources

Cambridge companies benefit from an unmatched array of excellent nearby educational and medical organizations:

- Massachusetts General Hospital
- The Longwood Medical Area
- The Boston University Medical Center
- The New England Medical Center
- Medical Schools at Boston University, Harvard, and Tufts.

The map also shows the proximity of Cambridge to Logan Airport.

2000 Whitehead Institute succeeds in human genome mapping project

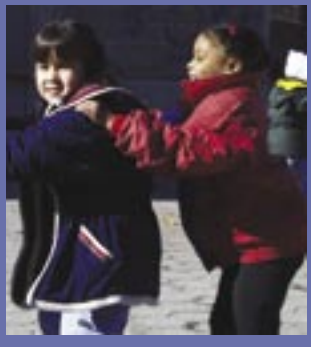
2002 Novartis begins its move from Switzerland to Cambridge

2004 MIT, Harvard and The Broad Foundation break ground for the new Broad Institute

Lion Bioscience Inc., Idenix Pharmaceuticals, Genomics Collaboratives Inc., Metabolix Inc.,

John Chase, Harvard University News Office

Kris Snibbe, Harvard University News Office



Yolanda McCollum/Teen Images

Cambridge, an excellent home for biotech, a great place to live

Clockwise from top left: sitting by the Charles River, Harvard Square at sunset & midday, kids at play, a summertime concert, a strategic game of chess, and a walk along Lechmere Canal Park. The cultural diversity, intellectual talent, and institutional resources add to the vitality and innovation of this special city.

Don Gurewitz

For further information about Cambridge and its biotech environment, please contact:

Cambridge Community Development Department

Economic Development Division • 344 Broadway, Cambridge, MA 02139 • 617-349-4600 • www.cambridgema.gov

2006 The Broad Institute moves into its new facility in Kendall Square

2008 Cambridge is uniquely positioned to support growth in the life sciences

2010 Cambridge continues to be a special place to live, work and play

CompCyte Corp., Advanced Magnetics Inc., Wyeth BioPharma, Hybridon Inc., ActivBiotics Inc.